

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding the amino acid sequence set forth in SEQ ID NO: ~~1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence~~, and capable of detecting NF- κ B inducing kinase (NIK) in a Western blot, enzyme-linked immunosorbent assay (ELISA), or immunoprecipitation assay.
2. (Canceled)
3. (Previously presented) The antibody preparation of claim 1, wherein said amino acid sequence is located in a flanking region of the NIK kinase domain.
4. (Original) The antibody preparation of claim 1 wherein said amino acid sequence is SEQ ID NO: 7.
5. (Original) The antibody preparation of claim 1 wherein said amino acid sequence is SEQ ID NO: 11.
6. (Original) The antibody preparation of claim 3 wherein said amino acid sequence is SEQ ID NO: 12.
7. (Original) The antibody preparation of claim 1, wherein said antibody is an IgG antibody.
8. (Previously presented) The antibody preparation of claim 1, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', and an F(ab')₂.
9. (Original) The antibody preparation of claim 1, wherein said antibody or antibody fragment is further capable of regulating a biochemical activity of a NIK molecule.
10. (Canceled)

11. (Currently amended) The antibody preparation according to claim 1 ~~40~~, capable of specifically detecting NIK by Western immunoblotting analysis.

12. (Currently amended) The antibody preparation according to claim 1 ~~40~~, capable of specifically detecting NIK by ELISA.

13. (Currently amended) The antibody preparation according to claim 1 ~~40~~, capable of specifically detecting NIK by immunoprecipitation.

14. (Currently amended) A preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding NIK ~~or a mutein, functional derivative, active fraction, circularly permuted derivative or salt thereof~~, the antibody prepared by immunizing a mammal with a peptide comprising the amino acid sequence set forth in SEQ ID NO: 7 ~~or a portion of said amino acid sequence~~.

15. (Original) A preparation according to claim 14, capable of detecting murine NIK.

16. (Original) A preparation according to claim 14, prepared by immunizing a rodent.

17. (Currently amended) A method for preparing a monoclonal antibody comprising immunizing a mammal with a peptide consisting essentially of the amino acid sequence set forth in SEQ ID NO: ~~1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, 13, 15, 18, 19, 20, or 22~~.

18. (Canceled)

19. (Currently amended) A monoclonal antibody specifically binding the amino acid sequence set forth in SEQ ID NO: ~~1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence~~.

20. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is in the flanking region of the NIK kinase domain.

21. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 7.

22. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 11.

23. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 12.

24. (Previously presented) The monoclonal antibody of claim 19 generated by hybridoma clone Pep 7-81.1 deposited at the CNCM under No.1-3092.

25. (Previously presented) The monoclonal antibody of claim 19 generated by hybridoma clone Pep 11-355.8 deposited at the CNCM under No.1-3093.

26. (Previously presented) The monoclonal antibody of claim 19 generated by hybridoma clone Pep 12-629-62-18 deposited at the CNCM under No. 1-3094.

27. (Original) An hybridoma clone deposited at the CNCM under No. I-3092

28. (Original) An hybridoma clone deposited at the CNCM under No. I-3093

29. (Original) An hybridoma clone deposited at the CNCM under No.1-3094.

30. (Currently amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof capable of specifically binding the amino acid sequence set forth in SEQ ID NO: ~~1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence.~~

31. (Canceled)

32. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 7.

33. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 11.

34. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 12.

35. (Original) The pharmaceutical composition of claim 30, wherein said antibody is an IgG antibody.

36. (Previously presented) The pharmaceutical composition of claim 30, wherein said polyclonal, monoclonal, chimeric, humanized or anti-anti-idiotypic antibody or antibody fragment is derived from mouse.

37. (Previously presented) The pharmaceutical composition of claim 30, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', and an F(ab')₂.

38. (Original) The pharmaceutical composition of claim 30, wherein said antibody or antibody fragment is further capable of regulating a biochemical activity of a NIK molecule.

39. (Withdrawn) A method of regulating a biochemical activity of a NIK molecule, the method comprising contacting the NIK molecule with a preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof capable of specifically binding the amino acid sequence set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence, thereby regulating a biochemical activity of a NIK molecule.

40. (Withdrawn) The method of claim 39, wherein said contacting the NIK molecule with said preparation is effected by administering said preparation to an individual.

41. (Withdrawn) The method of claim 39, wherein said amino acid sequence is set forth in SEQ ID NO: 7, 8, 11, 12, 13 or 15.

42. (Withdrawn) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 7.

43. (Withdrawn) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 11.

44. (Withdrawn) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 12.

45. (Withdrawn) The method of claim 39, wherein said antibody is an IgG antibody.

46. (Withdrawn) The method of claim 41, wherein said antibody or antibody fragment is derived from mouse.

47. (Withdrawn) The method of claim 39, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', and an F(ab')₂.

48. (Withdrawn) A composition-of-matter comprising a substrate covalently attached to a polypeptide including an amino acid sequence set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence, for selectively capturing an antibody or antibody fragment capable of specifically binding the polypeptide.

49. (Withdrawn) The composition-of-matter of claim 48, wherein said amino acid sequence is set forth in SEQ ID NO: 7, 8, 11, 12, 13 or 15.

50. (Withdrawn) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 7.

51. (Withdrawn) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 11.

52. (Withdrawn) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 12.

53. (Withdrawn) The composition-of-matter of claim 48, wherein said substrate is an affinity chromatography matrix.

54. (Withdrawn) The composition-of-matter of claim 48, wherein said substrate comprises a carbohydrate or a derivative of said carbohydrate.

55. (Withdrawn) The composition-of-matter of claim 48, wherein said carbohydrate is selected from the group consisting of agarose, sepharose, and cellulose.

56. (Withdrawn) The composition-of-matter of claim 49, wherein said substrate is selected from the group consisting of a bead, a resin, or a plastic surface.

57.-64. (Canceled)

65. (Withdrawn) A method for preparing a monoclonal antibody comprising growing a cloned hybridoma derived from (a) a spleen cell from a mammal immunized with an amino acid sequence set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence, and (b) a homogeneous or heterogeneous lymphoid cell in liquid medium or mammalian abdomen, thereby allowing the hybridoma to produce the monoclonal antibody.

66. (Withdrawn) A method of claim 65, wherein the amino acid sequence is set forth in SEQ ID NO: 7, 8, 11, 12, 13 or 15.

67. (Withdrawn) A method of claim 65, wherein the amino acid sequence is SEQ ID NO: 7.

68. (Withdrawn) A method of claim 65, wherein the amino acid sequence is SEQ ID NO: 11.

69. (Withdrawn) A method of claim 65, wherein the amino acid sequence is SEQ ID NO: 12.

70. (Withdrawn) A method of treating a disease caused or aggravated by the activity of NIK, comprising administering to an individual in need a preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti- anti-idiotypic antibodies and/or fragments thereof capable of specifically binding an amino acid sequence set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, or a portion of said amino acid sequence.

71. (Withdrawn) The method of claim 70, wherein said amino acid sequence is set forth in SEQ ID NO: 7, 8, 11, 12, 13 or 15.

72. (Withdrawn) The method of claim 70, wherein said amino acid sequence is SEQ ID NO : 7.

73. (Withdrawn) The method of claim 70, wherein said amino acid sequence is SEQ ID NO: 11.

74. (Withdrawn) The method of claim 70, wherein said amino acid sequence is SEQ ID NO: 12.

75. (Withdrawn) The method of claim 70, wherein said antibody is an IgG antibody.

76. (Withdrawn) The method of claim 71, wherein said antibody or antibody fragment is derived from mouse.

77. (Withdrawn) The method of claim 70, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', and an F(ab')₂.

78. (Withdrawn) A method of treatment according to claim 70, wherein the disease is a malignant disease or a disease associated with pathological immune responses.

79. (Withdrawn) A method of treatment according to claim 78, wherein the disease associated with pathological immune responses is selected from the group consisting of autoimmune, allergic, inflammatory, and transplantation-related diseases.

80. (Withdrawn) A method of treatment according to claim 79, wherein the disease is selected from the group consisting of asthma, rheumatoid arthritis, inflammatory bowel disease, atherosclerosis and Alzheimer's disease.

81. (Withdrawn) A method of treatment according to claim 78 wherein the disease is a malignant disease.

82. (Withdrawn) A method for purifying a NIK binding protein, which comprises contacting a sample containing NIK and the NIK-binding protein with an antibody preparation according to any one of claims 1 to 15, or an antibody according to any one of claims 17 to 25,
co-immunoprecipitating the NIK and NIK-binding protein,
washing the immune complex produced, and
recovering the NIK-binding protein from the immune complex using a competing peptide derived from NIK.

83. (Withdrawn) A method according to claim 82, wherein the sample is selected from body fluids, cell extracts and DNA expression libraries.

84.-85. (Canceled)